

1 28. A method of providing facsimile service over a digital subscriber line, comprising:

(a) dialing a telephone number associated with a facsimile machine connected to the digital subscriber line;

(b) setting up a circuit switched connection to [a packet data network ^{ISP} gateway];

(c) sending a plurality of facsimile data to the [packet data network gateway];

(d) converting the plurality of facsimile data to a packet data protocol to form a plurality of [packetized] facsimile data; and

(e) routing the [packetized] facsimile data over the digital subscriber line.

2 29. The method of claim 28, further comprising:

(f) receiving the packetized facsimile data at a local area network hub;

(g) routing the packetized facsimile data to the facsimile machine.

3 30. The method of claim 29, wherein (g) further comprises:

(g1) formatting the packetized facsimile data in a local area network protocol.

4 31. The method of claim 28, wherein step (c) further includes the step of:

(c1) emulating an analog facsimile data standard at the packet data network gateway.

5 32. The method of claim 29, wherein routing the packetized facsimile data to the facsimile machine comprises routing the packetized facsimile data via a digital facsimile machine.

6 33. The method of claim 29, wherein (g) further comprises:

(g1) receiving the packetized facsimile data at a subscriber unit;

(g2) converting the packetized facsimile data to the analog facsimile data by the subscriber unit.

7 34. A method of providing facsimile service over a digital subscriber line, comprising:

(a) dialing a telephone number at a facsimile machine connected to the digital subscriber line;

(b) transmitting a plurality of facsimile data over a local area network to a local area network hub;

(c) formatting the plurality of facsimile data for transmission over the digital subscriber line and transmitting the formatted plurality of facsimile data over the digital subscriber line to a [packet data network gateway].¹⁵ ISP

(d) establishing a packet data network telephone call, by the [packet data network gateway], to a facsimile machine associated with the telephone number; and

(f) transmitting the plurality of facsimile data over the [packet data network] telephone call to the facsimile machine associated with the telephone number.

8 35. The method of claim 34, wherein (a) further comprises:

(a1) receiving the telephone number at a subscriber unit;

(a2) emulating an analog telephone line by the subscriber unit;

(a3) receiving the plurality of facsimile data at the subscriber unit;

(a4) converting the plurality of facsimile data to a plurality of digital data.

15 36. A method of providing facsimile service over a digital subscriber line, comprising:

(a) dialing a telephone number at a facsimile machine connected to the digital subscriber line;

(b) transmitting a plurality of facsimile data over a local area network to a local area network hub;

(c) routing the plurality of facsimile data over the digital subscriber line to a [packet data network gateway].¹⁵ ISP

(d) routing the plurality of facsimile data to an interworking unit;

(e) converting the plurality of facsimile data to a circuit switched data protocol to form a circuit switched facsimile data; and

(f) transmitting the circuit switched facsimile data to a facsimile machine associated with the telephone number.

37. The method of claim 36, wherein (a) further comprises:

- (a1) receiving the telephone number at a subscriber unit;
- (a2) emulating an analog telephone line by the subscriber unit;
- (a3) receiving the plurality of facsimile data at the subscriber unit;
- (a4) converting the plurality of facsimile data to a plurality of digital data.

17. 38. A method of providing facsimile service over a digital subscriber line, comprising:

- (a) dialing a telephone number at a facsimile machine connected to the digital subscriber line;
- (b) transmitting a plurality of facsimile data over a packet data local area network to a packet data switch;
- (c) routing the plurality of facsimile data over the digital subscriber line to a network packet data switch using a virtual circuit;
- (d) transmitting the plurality of facsimile data over the virtual circuit to an interworking unit;
- (e) converting the plurality of facsimile data to a circuit switched data protocol to form a circuit switched facsimile data; and
- (f) transmitting the circuit switched facsimile data to a facsimile machine associated with the telephone number.

39. The method of claim 38, wherein (c) further comprises:

- (c1) transmitting a plurality of other data over a second virtual circuit to the packet data switch.

40. The method of claim 38, wherein (c) further comprises:

- (c1) transmitting a request for a switched virtual circuit to the network packet data switch;
- (c2) receiving a response including a virtual channel identifier.

41. The method of claim 38, wherein (c) further comprises:

(c1) determining a virtual path identifier and a virtual circuit identifier associated with the virtual circuit;

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42. The method of claim 39, wherein the second virtual circuit and the virtual circuit share the bandwidth of the digital subscriber line.

43. The method of claim 39, wherein the virtual circuit is transmitted over a separate frequency band from the second virtual circuit.

23. 44. A method of providing facsimile service over a digital subscriber line, comprising:

(a) dialing a phone number of a facsimile machine connected to the digital subscriber line;

(b) routing the call to an interworking unit;

(c) transmitting a plurality of circuit switched facsimile data to the interworking unit;

(d) converting the plurality of circuit switched facsimile data to a plurality of [ATM] packet data; and

(f) routing the packet data over a virtual circuit to the digital subscriber line.

45. The method of claim 44, further comprising:

(g) routing the [ATM] packet data over the digital subscriber line to an [ATM] packet data switch;

(h) routing the [ATM] packet data to the facsimile machine.

46. The method of claim 45, wherein (h) further comprises:

(h1) receiving the [ATM] packet data at a subscriber unit;

(h2) converting the [ATM] packet data to a plurality of analog data;

(h3) transmitting the plurality of analog data to the facsimile machine.

47. The method of claim 44, wherein (b) further comprises:

(b1) receiving the telephone number at a service switching point;

(b2) triggering on the telephone number;